IFWO

RAW SEQUENCE LISTING   DATE: 10/07/2004
PATENT APPLICATION: US/10/713,182   TIME: 10:55:30

Input Set : **A:\sequence.ST25.txt**
Output Set: **N:\CRF4\10072004\J713182.raw**

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 3 <110> APPLICANT: Otto, Eric
 4         Escovar-Kousen, Jose
 6 <120> TITLE OF INVENTION: Ethanol Production By Simultaneous Saccharification and
 7         Fermentation (SSF)
 9 <130> FILE REFERENCE: 10325.200-US
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C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/713,182
C--> 11 <141> CURRENT FILING DATE: 2003-11-14
     11 <160> NUMBER OF SEQ ID NOS: 8
     13 <170> SOFTWARE: PatentIn version 3.3
     15 <210> SEQ ID NO: 1
     16 <211> LENGTH: 25
     17 <212> TYPE: PRT
     18 <213> ORGANISM: Talaromyces emersonii
     21 <220> FEATURE:
     22 <221> NAME/KEY: misc_feature
     23 <222> LOCATION: (13)..(13)
     24 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     26 <400> SEQUENCE: 1
W--> 28 Ala Asn Gly Ser Leu Asp Ser Phe Leu Ala Thr Glu Xaa Pro Ile Ala
     29 1               5                   10                  15
     32 Leu Gln Gly Val Leu Asn Asn Ile Gly
     33             20                  25
     36 <210> SEQ ID NO: 2
     37 <211> LENGTH: 20
     38 <212> TYPE: PRT
     39 <213> ORGANISM: Talaromyces emersonii
     41 <400> SEQUENCE: 2
     43 Val Gln Thr Ile Ser Asn Pro Ser Gly Asp Leu Ser Thr Gly Gly Leu
     44 1               5                   10                  15
     47 Gly Glu Pro Lys
     48             20
     51 <210> SEQ ID NO: 3
     52 <211> LENGTH: 22
     53 <212> TYPE: PRT
     54 <213> ORGANISM: Talaromyces emersonii
     57 <220> FEATURE:
     58 <221> NAME/KEY: misc_feature
     59 <222> LOCATION: (1)..(1)
     60 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     62 <220> FEATURE:
     63 <221> NAME/KEY: misc_feature
     64 <222> LOCATION: (12)..(12)
     65 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
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        67 <400> SEQUENCE: 3
W-->    69 Xaa Asn Val Asn Glu Thr Ala Phe Thr Gly Pro Xaa Gly Arg Pro Gln
        70 1               5                   10                  15
        73 Arg Asp Gly Pro Ala Leu
        74             20
        77 <210> SEQ ID NO: 4
        78 <211> LENGTH: 35
        79 <212> TYPE: PRT
        80 <213> ORGANISM: Talaromyces emersonii
        82 <400> SEQUENCE: 4
        84 Asp Val Asn Ser Ile Leu Gly Ser Ile His Thr Phe Asp Pro Ala Gly
        85 1               5                   10                  15
        88 Gly Cys Asp Asp Ser Thr Phe Gln Pro Cys Ser Ala Arg Ala Leu Ala
        89             20                  25                  30
        92 Asn His Lys
        93             35
        96 <210> SEQ ID NO: 5
        97 <211> LENGTH: 16
        98 <212> TYPE: PRT
        99 <213> ORGANISM: Talaromyces emersonii
       102 <220> FEATURE:
       103 <221> NAME/KEY: misc_feature
       104 <222> LOCATION: (2)..(2)
       105 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
       107 <400> SEQUENCE: 5
W-->   109 Thr Xaa Ala Ala Ala Glu Gln Leu Tyr Asp Ala Ile Tyr Gln Trp Lys
       110 1               5                   10                  15
       113 <210> SEQ ID NO: 6
       114 <211> LENGTH: 35
       115 <212> TYPE: PRT
       116 <213> ORGANISM: Talaromyces emersonii
       118 <400> SEQUENCE: 6
       120 Ala Gln Thr Asp Gly Thr Ile Val Trp Glu Asp Asp Pro Asn Arg Ser
       121 1               5                   10                  15
       124 Tyr Thr Val Pro Ala Tyr Cys Gly Gln Thr Thr Ala Ile Leu Asp Asp
       125             20                  25                  30
       128 Ser Trp Gln
       129             35
       132 <210> SEQ ID NO: 7
       133 <211> LENGTH: 591
       134 <212> TYPE: PRT
       135 <213> ORGANISM: Talaromyces emersonii
       137 <400> SEQUENCE: 7
       139 Ala Thr Gly Ser Leu Asp Ser Phe Leu Ala Thr Glu Thr Pro Ile Ala
       140 1               5                   10                  15
       143 Leu Gln Gly Val Leu Asn Asn Ile Gly Pro Asn Gly Ala Asp Val Ala
       144             20                  25                  30
       147 Gly Ala Ser Ala Gly Ile Val Val Ala Ser Pro Ser Arg Ser Asp Pro
       148             35                  40                  45
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151 Asn Tyr Phe Tyr Ser Trp Thr Arg Asp Ala Ala Leu Thr Ala Lys Tyr
152     50              55              60
155 Leu Val Asp Ala Phe Asn Arg Gly Asn Lys Asp Leu Glu Gln Thr Ile
156 65              70              75              80
159 Gln Gln Tyr Ile Ser Ala Gln Ala Lys Val Gln Thr Ile Ser Asn Pro
160             85              90              95
163 Ser Gly Asp Leu Ser Thr Gly Gly Leu Gly Glu Pro Lys Phe Asn Val
164             100             105             110
167 Asn Glu Thr Ala Phe Thr Gly Pro Trp Gly Arg Pro Gln Arg Asp Gly
168         115             120             125
171 Pro Ala Leu Arg Ala Thr Ala Leu Ile Ala Tyr Ala Asn Tyr Leu Ile
172     130             135             140
175 Asp Asn Gly Glu Ala Ser Thr Ala Asp Glu Ile Ile Trp Pro Ile Val
176 145             150             155             160
179 Gln Asn Asp Leu Ser Tyr Ile Thr Gln Tyr Trp Asn Ser Ser Thr Phe
180             165             170             175
183 Asp Leu Trp Glu Glu Val Glu Gly Ser Ser Phe Phe Thr Thr Ala Val
184             180             185             190
187 Gln His Arg Ala Leu Val Glu Gly Asn Ala Leu Ala Thr Arg Leu Asn
188         195             200             205
191 His Thr Cys Ser Asn Cys Val Ser Gln Ala Pro Gln Val Leu Cys Phe
192     210             215             220
195 Leu Gln Ser Tyr Trp Thr Gly Ser Tyr Val Leu Ala Asn Phe Gly Gly
196 225             230             235             240
199 Ser Gly Arg Ser Gly Lys Asp Val Asn Ser Ile Leu Gly Ser Ile His
200             245             250             255
203 Thr Phe Asp Pro Ala Gly Gly Cys Asp Asp Ser Thr Phe Gln Pro Cys
204             260             265             270
207 Ser Ala Arg Ala Leu Ala Asn His Lys Val Val Thr Asp Ser Phe Arg
208         275             280             285
211 Ser Ile Tyr Ala Ile Asn Ser Gly Ile Ala Glu Gly Ser Ala Val Ala
212     290             295             300
215 Val Gly Arg Tyr Pro Glu Asp Val Tyr Gln Gly Gly Asn Pro Trp Tyr
216 305             310             315             320
219 Leu Ala Thr Ala Ala Ala Ala Glu Gln Leu Tyr Asp Ala Ile Tyr Gln
220             325             330             335
223 Trp Lys Lys Ile Gly Ser Ile Ser Ile Thr Asp Val Ser Leu Pro Phe
224             340             345             350
227 Phe Gln Asp Ile Tyr Pro Ser Ala Ala Val Gly Thr Tyr Asn Ser Gly
228         355             360             365
231 Ser Thr Thr Phe Asn Asp Ile Ile Ser Ala Val Gln Thr Tyr Gly Asp
232     370             375             380
235 Gly Tyr Leu Ser Ile Val Glu Lys Tyr Thr Pro Ser Asp Gly Ser Leu
236 385             390             395             400
239 Thr Glu Gln Phe Ser Arg Thr Asp Gly Thr Pro Leu Ser Ala Ser Ala
240             405             410             415
243 Leu Thr Trp Ser Tyr Ala Ser Leu Leu Thr Ala Ser Ala Arg Arg Gln
244             420             425             430
247 Ser Val Val Pro Ala Ser Trp Gly Glu Ser Ser Ala Ser Ser Val Leu
```

```
248           435              440              445
251 Ala Val Cys Ser Ala Thr Ser Ala Thr Gly Pro Tyr Ser Thr Ala Thr
252     450              455              460
255 Asn Thr Val Trp Pro Ser Ser Gly Ser Gly Ser Ser Thr Thr Thr Ser
256 465              470              475              480
259 Ser Ala Pro Cys Thr Thr Pro Thr Ser Val Ala Val Thr Phe Asp Glu
260              485              490              495
263 Ile Val Ser Thr Ser Tyr Gly Glu Thr Ile Tyr Leu Ala Gly Ser Ile
264              500              505              510
267 Pro Glu Leu Gly Asn Trp Ser Thr Ala Ser Ala Ile Pro Leu Arg Ala
268     515              520              525
271 Asp Ala Tyr Thr Asn Ser Asn Pro Leu Trp Tyr Val Thr Val Asn Leu
272     530              535              540
275 Pro Pro Gly Thr Ser Phe Glu Tyr Lys Phe Phe Lys Asn Gln Thr Asp
276 545              550              555              560
279 Gly Thr Ile Val Trp Glu Asp Asp Pro Asn Arg Ser Tyr Thr Val Pro
280              565              570              575
283 Ala Tyr Cys Gly Gln Thr Thr Ala Ile Leu Asp Asp Ser Trp Gln
284     580              585              590
287 <210> SEQ ID NO: 8
288 <211> LENGTH: 514
289 <212> TYPE: PRT
290 <213> ORGANISM: B. stearothermophilus
292 <400> SEQUENCE: 8
294 Ala Ala Pro Phe Asn Gly Thr Met Met Gln Tyr Phe Glu Trp Tyr Leu
295 1           5              10              15
298 Pro Asp Asp Gly Thr Leu Trp Thr Lys Val Ala Asn Glu Ala Asn Asn
299              20              25              30
302 Leu Ser Ser Leu Gly Ile Thr Ala Leu Trp Leu Pro Pro Ala Tyr Lys
303     35              40              45
306 Gly Thr Ser Arg Ser Asp Val Gly Tyr Gly Val Tyr Asp Leu Tyr Asp
307     50              55              60
310 Leu Gly Glu Phe Asn Gln Lys Gly Ala Val Arg Thr Lys Tyr Gly Thr
311 65              70              75              80
314 Lys Ala Gln Tyr Leu Gln Ala Ile Gln Ala Ala His Ala Ala Gly Met
315              85              90              95
318 Gln Val Tyr Ala Asp Val Val Phe Asp His Lys Gly Gly Ala Asp Gly
319              100              105              110
322 Thr Glu Trp Val Asp Ala Val Glu Val Asn Pro Ser Asp Arg Asn Gln
323     115              120              125
326 Glu Ile Ser Gly Thr Tyr Gln Ile Gln Ala Trp Thr Lys Phe Asp Phe
327     130              135              140
330 Pro Gly Arg Gly Asn Thr Tyr Ser Ser Phe Lys Trp Arg Trp Tyr His
331 145              150              155              160
334 Phe Asp Gly Val Asp Trp Asp Glu Ser Arg Lys Leu Ser Arg Ile Tyr
335              165              170              175
338 Lys Phe Arg Gly Ile Gly Lys Ala Trp Asp Trp Glu Val Asp Thr Glu
339              180              185              190
342 Asn Gly Asn Tyr Asp Tyr Leu Met Tyr Ala Asp Leu Asp Met Asp His
```

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```
343             195                200                205
346 Pro Glu Val Val Thr Glu Leu Lys Ser Trp Gly Lys Trp Tyr Val Asn
347    210                215                220
350 Thr Thr Asn Ile Asp Gly Phe Arg Leu Asp Ala Val Lys His Ile Lys
351 225                230                235                240
354 Phe Ser Phe Phe Pro Asp Trp Leu Ser Asp Val Arg Ser Gln Thr Gly
355                245                250                255
358 Lys Pro Leu Phe Thr Val Gly Glu Tyr Trp Ser Tyr Asp Ile Asn Lys
359                260                265                270
362 Leu His Asn Tyr Ile Met Lys Thr Asn Gly Thr Met Ser Leu Phe Asp
363                275                280                285
366 Ala Pro Leu His Asn Lys Phe Tyr Thr Ala Ser Lys Ser Gly Gly Thr
367        290                295                300
370 Phe Asp Met Arg Thr Leu Met Thr Asn Thr Leu Met Lys Asp Gln Pro
371 305                310                315                320
374 Thr Leu Ala Val Thr Phe Val Asp Asn His Asp Thr Glu Pro Gly Gln
375                325                330                335
378 Ala Leu Gln Ser Trp Val Asp Pro Trp Phe Lys Pro Leu Ala Tyr Ala
379                340                345                350
382 Phe Ile Leu Thr Arg Gln Glu Gly Tyr Pro Cys Val Phe Tyr Gly Asp
383        355                360                365
386 Tyr Tyr Gly Ile Pro Gln Tyr Asn Ile Pro Ser Leu Lys Ser Lys Ile
387        370                375                380
390 Asp Pro Leu Leu Ile Ala Arg Arg Asp Tyr Ala Tyr Gly Thr Gln His
391 385                390                395                400
394 Asp Tyr Leu Asp His Ser Asp Ile Ile Gly Trp Thr Arg Glu Gly Val
395                405                410                415
398 Thr Glu Lys Pro Gly Ser Gly Leu Ala Ala Leu Ile Thr Asp Gly Pro
399                420                425                430
402 Gly Gly Ser Lys Trp Met Tyr Val Gly Lys Gln His Ala Gly Lys Val
403        435                440                445
406 Phe Tyr Asp Leu Thr Gly Asn Arg Ser Asp Thr Val Thr Ile Asn Ser
407        450                455                460
410 Asp Gly Trp Gly Glu Phe Lys Val Asn Gly Gly Ser Val Ser Val Trp
411 465                470                475                480
414 Val Pro Arg Lys Thr Thr Val Ser Thr Ile Ala Trp Ser Ile Thr Thr
415                485                490                495
418 Arg Pro Trp Thr Asp Glu Phe Val Arg Trp Thr Glu Pro Arg Leu Val
419                500                505                510
422 Ala Trp
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/07/2004
PATENT APPLICATION: **US/10/713,182**   TIME: 10:55:31

Input Set : **A:\sequence.ST25.txt**
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<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 13
Seq#:3; Xaa Pos. 1,12
Seq#:5; Xaa Pos. 2

VERIFICATION SUMMARY   DATE: 10/07/2004
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L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:28 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:69 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0